

**AMENDMENTS TO THE CLAIMS:**

Kindly cancel claims 11 and 18, without prejudice, amend claims 12-16, 19 and 23, and add new claims 26-28 as set forth below.

This listing of claims will replace all prior versions and listings of claims in the Application:

**Claims 1-11 (canceled)**

**Claim 12 (currently amended)** The process according to claim [[11]] 26, characterized in that wherein the process deposit is interrupted, and then restarted, to allow the substrate to remain cool.

**Claim 13 (currently amended)** The process according to claim [[11]] 26, characterized in that wherein the substrate is cooled during deposit or during periods of interruption of deposit the process.

**Claim 14 (currently amended):** The process according to claim [[11]] 26, wherein at least one layer of the deposited amorphous hafnium oxide [[has]] having a density between 6.4 and 8.1 gm/cm<sup>3</sup> is formed.

**Claim 15 (currently amended):** The process according to claim [[11]] 26, wherein at least one layer of the deposited hafnium oxide [[has]] having a density lower than 8 gm/cm<sup>3</sup> is formed.

**Claim 16 (currently amended):** The process according to claim [[11]] 26, wherein a stack of layers is formed.

**Claim 17 (previously presented):** The process according to claim 16, wherein the stack also includes at least one layer formed of a material having a refractive index different from that of hafnium oxide.

HAYES SOLOWAY P.C.  
130 W. CLUSHING STREET  
TUCSON, AZ 85701  
TEL. 520.882.7623  
FAX. 520.882.7643

175 CANAL STREET  
MANCHESTER, NH 03101  
TEL. 603.668.1400  
FAX. 603.668.8567

**Claim 18 (canceled):**

**Claim 19 (currently amended):** Process as claimed in Claim [[11]] 26, wherein a stack comprising at least one layer of another material is formed on a surface of the ~~deposited~~ amorphous layer of hafnium oxide [[layer]].

**Claim 20 (previously presented):** Process as claimed in Claim 19, wherein said another material comprises silicon oxide.

**Claim 21 (previously presented):** Process as claimed in Claim 19, wherein the stack comprises alternate layers of amorphous hafnium oxide having a density less than 8 gm/cm<sup>3</sup> and another material.

**Claim 22 (previously presented):** The process as claimed in Claim 21, wherein said another material comprises silicon oxide.

**Claim 23 (currently amended):** A process for forming an optical component which comprises vacuum depositing on a substrate at least one layer of amorphous hafnium oxide by the process of claim [[11]] 26.

**Claim 24 (previously presented):** The process according to claim 23, wherein the at least one layer of hafnium oxide comprises amorphous hafnium oxide having a density less than 8 gm/cm<sup>3</sup>.

**Claim 25 (previously presented):** The process according to claim 24, wherein the optical component comprises a mirror.

**Claim 26 (new):** A process for forming a layer of hafnium oxide on a substrate which comprises forming a vapor of hafnium by reactive evaporation of metallic hafnium, and condensing without ion bombardment the vapor on the substrate under oxygen while

HAYES SOLOWAY P.C.  
130 W. CUSHING STREET  
TUCSON, AZ 85701  
TEL. 520.882.7623  
FAX. 520.882.7643

175 CANAL STREET  
MANCHESTER, NH 03101  
TEL. 603.668.1400  
FAX. 603.668.8567

maintaining the substrate at ambient temperature, to form an amorphous layer of hafnium oxide.

**Claim 27 (new):** The process according to claim 26, wherein the substrate is at about 20°C.

**Claim 28 (new):** The process according to claim 26, wherein the process is conducted in a vacuum chamber.

HAYES SOLOWAY P.C.  
130 W. CUSHING STREET  
TUCSON, AZ 85701  
TEL. 520.882.7623  
FAX. 520.882.7643

175 CANAL STREET  
MANCHESTER, NH 03101  
TEL. 603.668.1400  
FAX. 603.668.8567